Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method for recovery from a failure which affects an active routing entity in a communications network, the active routing entity being associated with a network node of the communications network, the communications network comprising a routing protocol for intermittent advertisement of local state information throughout the network and further comprising an inactive routing entity to which network connections of the network node can be diverted from the active routing entity upon the said failure, the method comprising the steps of:

(a) upon the failure, executing an activity switch between the active routing entity and the inactive routing entity, wherein network connections of the network node are diverted from the active routing entity to the inactive routing entity to thereby transform the inactive routing entity into a newly active routing entity;

(b) following the activity switch, exchanging topology state information between the newly active routing entity and each immediately adjacent neighbour node of the network node associated with said failure such that the newly active routing entity and every said immediately adjacent neighbour node respectively possess synchronized topology state information; and

wherein the exchange of topology state information between the newly active routing entity and each said immediately adjacent neighbour node is performed without withdrawal, by the network node associated with said failure and by each said immediately adjacent neighbour node, of the said intermittent advertisement of local state information as it pertains respectively to the network node associated with said failure and to each said immediately adjacent neighbour node.

2. (Previously Presented) The method according to Claim 1, further comprising the step of transmitting topology state information to the inactive routing entity prior to the failure, whereby the active routing entity and the inactive routing entity both share a common understanding of overall network topology status immediately following said transmission of topology state information.

3. (Previously Presented) The method according to Claim 2, wherein the transmission of topology state information is periodic.

4. (Previously Presented) The method according to Claim 3, wherein the periodic transmission of topology state information to the inactive routing entity is from the active routing entity.

5. (Previously Presented) The method according to Claim 2, further comprising the step of transmitting local state information to the inactive routing entity prior to the failure, whereby the active routing entity and the inactive routing entity both share a common understanding of local status immediately following said transmission of local state information.

6. (Previously Presented) The method according to Claim 5, wherein the transmission of local state information is periodic.

7. (Previously Presented) The method according to Claim 6, wherein the periodic transmission of local state information to the inactive routing entity is from the active routing entity.

8. (Previously Presented) The method according to Claim 5, wherein the local state information comprises local link status information and local nodal status information.

9. (Currently Amended) The method according to Claim 8, wherein the local link status

information is selected from the group ~~comprising~~ consisting of link characteristics, link operational status and port identifiers.

10. (Currently Amended) The method according to Claim 8, wherein the local nodal status information is selected from the group ~~comprising~~ consisting of node identifier, peer group identifier, distinguished node election status, distinguished node leadership status and local reachable addresses.

11. (Previously Presented) The method according to Claim 7, wherein the active routing entity and the inactive routing entity each forms part of the network node associated with said failure.

12. (Previously Presented) The method according to Claim 11, wherein the active routing entity and the inactive routing entity are each implemented by way of distinct physical components.

13. (Previously Presented) The method according to Claim 5, wherein the communications network is an Asynchronous Transfer Mode (ATM) network and the routing protocol for intermittent advertisement of local state information throughout the communications network is the PNNI protocol.

14. (Previously Presented) he method according to Claim 5, wherein the communications network is an Internet Protocol (IP) network and the routing protocol for intermittent advertisement of local state information throughout the communications network is the Open Shortest Path First (OSPF) protocol.

15. (Previously Presented) The method according to Claim 13, wherein topology state information transmitted from the active routing entity prior to the failure is extracted from a topology database associated with the active routing entity, and wherein topology state information which is exchanged following the activity switch between the newly

active routing entity and every said immediately adjacent neighbour node is extracted from a topology database respectively associated with the newly active routing entity and every said immediately adjacent neighbour node.

16. (Previously Presented) The method according to Claim 15, wherein topology state information is transmitted from the active routing entity to the inactive routing entity prior to the failure by bundling the topology state information into PNNI Topology State Elements (PTSE).

17. (Previously Presented) The method according to Claim 15, wherein topology state information is exchanged following the activity switch between the newly active routing entity and every said immediately adjacent neighbour node by bundling the topology state information into PNNI Topology State Elements (PTSE).

18. (Previously Presented) The method according to Claim 16, wherein each PTSE is encapsulated within PNNI Topology State Packets (PTSP) for said transmission.

19. (Previously Presented) The method according to Claim 17, wherein each PTSE is encapsulated within PNNI Topology State Packets (PTSP) for said exchange.

20. (Previously Presented) The method according to Claim 15, wherein the newly active routing entity, prior to the said exchange of topology state information with each said immediately adjacent neighbour node, notifies each said immediately adjacent neighbour node that the said exchange is to take place without said withdrawal of the said intermittent advertisement of local state information.

21. (Previously Presented) The method according to Claim 20, wherein the notifying of the said exchange of topology state information without said withdrawal of the said intermittent advertisement of local state information takes place by way of a flag in a notification message sent to each immediately adjacent neighbour node of the network

node associated with said failure.

22. (Previously Presented) The method according to Claim 21, wherein the notification message is a PNNI Database Summary packet in which said flag is provisioned.

23. (Previously Presented) A network element for recovery from a failure in a communications network which includes a routing protocol for intermittent advertisement of local state information throughout the network, the network element comprising:

an active routing entity, wherein the active routing entity is associated with topology state information concerning the communications network;

an inactive routing entity, wherein an activity switch is executed between the active routing entity and the inactive routing entity upon failure of the active routing entity to thereby divert network connections from the active routing entity to the inactive routing entity and transform the inactive routing entity into a newly active routing entity;

a database synchronization processor, wherein the database synchronization processor effects an exchange of topology state information between the newly active routing entity and each immediately adjacent neighbour node of the network element following the activity switch such that the newly active routing entity and every said immediately adjacent neighbour node respectively possess synchronized topology state information, and wherein the said exchange of topology state information between the newly active routing entity and each said immediately adjacent neighbour node is performed without withdrawal, by the network node associated with said failure and by each said immediately adjacent neighbour node, of the said intermittent advertisement of local state information as it pertains respectively to the network element and to each immediately adjacent neighbour node.

24. (Previously Presented) The network element according to Claim 23, wherein the topology state information is transmitted to the inactive routing entity prior to the failure of the active routing entity, such that the active routing entity and the inactive routing

entity both share a common understanding of overall network topology status following said transmission of topology state information.

25. (Previously Presented) The network element according to Claim 24, wherein the transmission of topology state information is periodic.

26. (Previously Presented) The network element according to Claim 25, wherein the periodic transmission of topology state information to the inactive routing entity is from the active routing entity.

27. (Previously Presented) The network element according to Claim 24, wherein local state information is transmitted to the inactive routing entity prior to the failure of the active routing entity, whereby the active routing entity and the inactive routing entity both share a common understanding of local status immediately following said transmission of local state information.

28. (Previously Presented) The network element according to Claim 27, wherein the transmission of local state information is periodic.

29. (Previously Presented) The network element according to Claim 28, wherein the periodic transmission of local state information to the inactive routing entity is from the active routing entity.

30. (Previously Presented) The network element according to Claim 24, wherein the local state information comprises link status information and local nodal status information.

31. (Currently Amended) The network element according to Claim 30, wherein the local link status information is selected from the group ~~comprising~~ consisting of link characteristics, link operational status and port identifiers.

32. (Currently Amended) The network element according to Claim 31, wherein the local nodal status information is selected from the group ~~comprising~~ consisting of node identifier, peer group identifier, distinguished node election status, distinguished node leadership status and local reachable addresses.

33. (Previously Presented) The network element according to Claim 32, wherein the active routing entity and the inactive routing entity are each implemented by way of distinct physical components.

34. (Previously Presented) The network element according to Claim 26, wherein the communications network is an Asynchronous Transfer Mode (ATM) network and the routing protocol for intermittent advertisement of local state information throughout the communications network is the PNNI protocol.

35. (Previously Presented) The network element according to Claim 26, wherein the communications network is an Internet Protocol (IP) network and the routing protocol for intermittent advertisement of link status information throughout the communications network is the Open Shortest Path First (OSPF) protocol.

36. (Previously Presented) The network element according to Claim 34, wherein topology state information transmitted from the active routing entity prior to the failure of the active routing entity is extracted from a topology database associated with the active routing entity, and wherein topology state information which is exchanged following the activity switch between the newly active routing entity and every said immediately adjacent neighbour node is extracted from a topology database respectively associated with the newly active routing entity and every said immediately adjacent neighbour node.

37. (Previously Presented) The network element according to Claim 23, wherein topology state information is transmitted from the active routing entity to the inactive

routing entity prior to the failure by bundling the topology state information into PNNI Topology State Elements (PTSE).

38. (Previously Presented) The network element according to Claim 23, wherein topology state information is exchanged following the activity switch between the newly active routing entity and every said immediately adjacent neighbour by bundling the topology state information into PNNI Topology State Elements (PTSE).

39. (Previously Presented) The network element according to Claim 37, wherein each PTSE is encapsulated within PNNI Topology State Packets (PTSP) for said transmission.

40. (Previously Presented) The network element according to Claim 38, wherein each PTSE is encapsulated within PNNI Topology State Packets (PTSP) for said exchange.

41. (Previously Presented) The network element according to Claim 23, wherein the newly active routing entity, prior to the said exchange of topology state information with each said immediately adjacent neighbour node, notifies each said immediately adjacent neighbour node that the said exchange is to take place without said withdrawal of the said intermittent advertisement of local state information.

42. (Previously Presented) The network element according to Claim 41, wherein the notifying of the said exchange of topology state information without said withdrawal of the said intermittent advertisement of local state information takes place by way of a flag in a notification message sent to each immediately adjacent neighbour node of the network element.

43. (Previously Presented) The network element according to Claim 42, wherein the notification message is a PNNI Database Summary packet in which said flag is provisioned.

44. (Previously Presented) A method for synchronization of topology state information between two network nodes in a communications network, the communications network comprising a routing protocol for intermittent advertisement of local state information throughout the network, the two network nodes comprising a requesting node which initiates a request for topology state synchronization and a replying node which receives said request and which communicates with the requesting node to provide topology state information to the requesting node which is not possessed by the requesting node when same initiates said request, the method comprising the step of selecting, prior to said request being made by the requesting node to the replying node, between a first and a second mode of synchronization, the first said mode providing for topology state synchronization which entails withdrawal, by the said requesting node and by the said replying node, of the said intermittent advertisement of local state information as it pertains respectively to the requesting node and to the replying node, and the second said mode providing for topology state synchronization which maintains the said intermittent advertisement of local state information as it pertains respectively to the requesting node and to the replying node.

45. (Previously Presented) The method according to Claim 44, further comprising the step of exchanging topology state information between the requesting node and the replying node once the request for topology state synchronization has been made by the requesting node to the replying node.

46. (Previously Presented) The method according to Claim 45, wherein prior to the said exchange of topology state information, the requesting node notifies the replying node that the said exchange is to take place according to one of the said first mode and the said second mode of synchronization.

47. (Previously Presented) The method according to Claim 46, wherein said notification takes place by way of a flag in a notification message sent by the requesting node to the replying node.

48. (Previously Presented) The method according to Claim 47, wherein the topology state information which is exchanged between the requesting node and the replying node is extracted from topology state databases each respectively associated with the said requesting and replying nodes.

49. (Previously Presented) The method according to Claim 47, wherein the communications network is an Asynchronous Transfer Mode (ATM) network and the routing protocol for intermittent advertisement of local state information throughout the network is the PNNI protocol.

50. (Previously Presented) The method according to Claim 47, wherein the communications network is an Internet Protocol (IP) network and the routing protocol for intermittent advertisement of local state information throughout the network is the Open Shortest Path First (OSPF) protocol.

51. (Previously Presented) The method according to Claim 49, wherein the notification message is a PNNI Database Summary packet in which said flag is provisioned.

52. (Previously Presented) The method according to Claim 51, wherein the topology state information is exchanged by bundling the topology state information into PNNI Topology State Elements (PTSE).

53. (Previously Presented) The method according to Claim 52, wherein each PTSE is encapsulated within PNNI Topology State Packets (PTSP).

54. (Previously Presented) A network element for synchronization of topology state information between two network nodes in a communications network, the communications network comprising a routing protocol for intermittent advertisement of local state information throughout the network, the two network nodes comprising a

requesting node which initiates a request for topology state synchronization and a replying node which receives said request and which communicates with the requesting node to provide topology state information to the requesting node which is not possessed by the requesting node when same initiates said request, the network element selectively operating in one of two modes of synchronization, wherein a first mode thereof effects topology state synchronization between the requesting node and the replying node which entails withdrawal, by the said requesting node and by the said replying node, of the said intermittent advertisement of local state information as it pertains respectively to the requesting node and to the replying node, and wherein a second mode thereof effects topology state synchronization between the requesting node and the replying node which maintains the said intermittent advertisement of local state information as it pertains respectively to the requesting node and to the replying node.

55. (Previously Presented) The network element according to Claim 54, wherein topology state information is exchanged between the requesting node and the replying node once the request for topology state synchronization has been made by the requesting node to the replying node.

56. (Previously Presented) The network element according to Claim 55, wherein prior to the said exchange of topology state information, the requesting node notifies the replying node that the said exchange is to take place according to one of the said first mode and the said second mode of synchronization.

57. (Previously Presented) The network element according to Claim 56, wherein said notification takes place by way of a flag in a notification message sent by the requesting node to the replying node.

58. (Previously Presented) The network element according to Claim 56, wherein the topology state information which is exchanged between the requesting node and the replying node is extracted from topology state databases each respectively associated

with the said requesting and replying nodes.

59. (Previously Presented) The network element according to Claim 57, wherein the communications network is an Asynchronous Transfer Mode (ATM) network and the routing protocol for intermittent advertisement of local state information throughout the network is the PNNI protocol.

60. (Previously Presented) The network element according to Claim 57, wherein the communications network is an Internet Protocol (IP) network and the routing protocol for intermittent advertisement of local state information throughout the network is the Open Shortest Path First (OSPF) protocol.

61. (Previously Presented) The network element according to Claim 59, wherein the notification message is a PNNI Database Summary packet in which said flag is provisioned.

62. (Previously Presented) The network element according to Claim 61, wherein the topology state information is exchanged by bundling the topology state information into PNNI Topology State Elements (PTSE).

63. (Previously Presented) The network element according to Claim 62, wherein each PTSE is encapsulated within PNNI Topology State Packets (PTSP).

64. (Previously Presented) A method for synchronization of topology state information between a first network node and a second network node in a communications network, the communications network comprising a routing protocol for exchange of local state information throughout the network, the first network node initiating a request for topology state synchronization and the second network node receiving said request and communicating with the first network node to provide topology state information to the first network node, the topology state synchronization taking place according to a first

mode thereof wherein the said exchange of local state information, as it pertains respectively to the first network node and to the second network node, is not withdrawn.

65. (Previously Presented) The method according to Claim 64, wherein a second mode of topology state synchronization is provided, the second mode of topology state synchronization entailing withdrawal, by the first network node and by the second network node, of the said exchange of local state information as it pertains respectively to the first network node and to the second network node.

66. (Previously Presented) The method according to Claim 65, further comprising the step of selecting, prior to said request being initiated by the first network node to the second network node, between the first mode of topology state synchronization and the second mode of topology state synchronization.

67. (Previously Presented) The method according to Claim 66, wherein the second network node communicates with the first network node to provide topology state information to the first network node which is not possessed by the first network node when same initiates said request.

68. (Previously Presented) The method according to Claim 67, wherein prior to the said exchange of topology state information, the first network node notifies the second network node that the said exchange of topology state information is to take place according to one of the said first mode and the said second mode of synchronization.

69. (Previously Presented) The method according to Claim 68, wherein said notification takes place by way of a flag in a notification message sent by the first network node to the second network node.

70. (Previously Presented) The method according to Claim 69, wherein the topology state information which is exchanged between the first network node and the second

network node is extracted from topology state databases each respectively associated with the said first and second network nodes.

71. (Previously Presented) The method according to Claim 70, wherein the communications network is an Asynchronous Transfer Mode (ATM) network and the routing protocol for exchange of local state information throughout the network is the PNNI protocol.

72. (Previously Presented) The method according to Claim 70, wherein the communications network is an Internet Protocol (IP) network and the routing protocol for exchange of local state information throughout the network is the Open Shortest Path First (OSPF) protocol.

73. (Previously Presented) The method according to Claim 71, wherein the notification message is a PNNI Database Summary packet in which said flag is provisioned.

74. (Previously Presented) The method according to Claim 73, wherein the topology state information is exchanged by bundling the topology state information into PNNI Topology State Elements (PTSE).

75. (Previously Presented) The method according to Claim 74, wherein each PTSE is encapsulated within PNNI Topology State Packets (PTSP).

76. (Previously Presented) A network element for synchronization of topology state information between a first network node and a second network node in a communications network, the communications network comprising a routing protocol for exchange of local state information throughout the network, the first network node initiating a request for topology state synchronization and the second network node receiving said request and communicating with the first network node to provide topology state information to the first network node, the topology state synchronization

taking place according to a first mode thereof wherein the said exchange of local state information, as it pertains respectively to the first network node and to the second network node, is not withdrawn.

77. (Previously Presented) The network element according to Claim 76, wherein a second mode of topology state synchronization is provided, the second mode of topology state synchronization entailing withdrawal, by the first network node and by the second network node, of the said exchange of local state information as it pertains respectively to the first network node and to the second network node, the network element selectively operating in one of the two said modes of topology state synchronization.

78. (Previously Presented) The network element according to Claim 77, wherein prior to said request being initiated by the first network node to the second network node, the network element selects between the first mode of topology state synchronization and the second mode of topology state synchronization.

79. (Previously Presented) The network element according to Claim 78, wherein prior to said request being initiated by the first network node to the second network node, the first network node notifies the second network node that the said exchange of topology state information is to take place according to one of the first mode of topology state synchronization and the second mode of topology state synchronization.

80. (Previously Presented) The network element according to Claim 79, wherein the second network node communicates with the first network node to provide topology state information to the first network node which is not possessed by the first network node when same initiates said request.

81. (Previously Presented) The method according to Claim 80, wherein said notification takes place by way of a flag in a notification message sent by the first network node to the second network node.

82. (Previously Presented) The method according to Claim 81, wherein the topology state information which is exchanged between the first network node and the second network node is extracted from topology state databases each respectively associated with the said first and second network nodes.

83. (Previously Presented) The method according to Claim 82, wherein the communications network is an Asynchronous Transfer Mode (ATM) network and the routing protocol for exchange of local state information throughout the network is the PNNI protocol.

84. (Previously Presented) The method according to Claim 82, wherein the communications network is an Internet Protocol (IP) network and the routing protocol for exchange of local state information throughout the network is the Open Shortest Path First (OSPF) protocol.

85. (Previously Presented) The method according to Claim 83, wherein the notification message is a PNNI Database Summary packet in which said flag is provisioned.

86. (Previously Presented) The method according to Claim 85, wherein the topology state information is exchanged by bundling the topology state information into PNNI Topology State Elements (PTSE).

87. (Previously Presented) The method according to Claim 86, wherein each PTSE is encapsulated within PNNI Topology State Packets (PTSP).